

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the reasons that follow.

No claims have been amended. Claims 1-19 remain pending, of which claims 6-13 and 15-17 have been withdrawn from consideration.

Rejection under 35 U.S.C. § 103

Claims 1-5, 14, 18 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,229,656 to Omura (“Omura”) in view of U.S. Patent No. 6,194,713 to Kanazawa (“Kanazawa”). Applicant respectfully traverses this rejection for at least the following reasons.

Independent claim 1 recites, inter alia, that the “light receiving surface of the horizontal synchronization detecting means is tilted in the vertical scanning direction so as to output a horizontal synchronized signal when the light beams come to the same position on the surface to be scanned in the horizontal scanning direction.” (emphasis added). Omura and Kanazawa fail to disclose or suggest at least this feature of claim 1, or its attendant advantages.

The Office Action recognizes that Omura fails to disclose its horizontal synchronization detector tilted in a vertical scanning direction, as recited in claim 1, stating on pages 2-3, “Omura does not explicitly teach a light receiving surface of the horizontal synchronization detecting means is tilted in the vertical scanning direction so as to output a horizontal synchronized signal when the light beams come to the same position on the surface to be scanned in the horizontal scanning direction.” The Office Action, however, relies on Kanazawa for disclosing this feature. Applicant respectfully disagrees.

Kanazawa discloses an SOS sensor 50. In aligning the sensor, an operator rotates the adjustable holder 46 with respect to a cylindrical support 42 so as to rotate the sensor 50

about a center O (See FIG. 9, col. 9, lines 51-64). This rotation about the center O, however, does not incline the light receiving surface of the SOS sensor relative to the page surface, which would correspond to the scanning surface. In the rotation of the SOS sensor about O, the light receiving surface of the SOS sensor remains in the page as seen in FIG. 9. Thus the rotation of the SOS sensor 50 does not correspond to an inclination of the SOS sensor 50 in the vertical scanning direction, and Kanazawa does not disclose tilting its sensor 50 in a vertical scanning direction.

Thus, even if Omura and Kanazawa were combined, the result would not suggest as recited in claim 1, a “light receiving surface of the horizontal synchronization detecting means is tilted in the vertical scanning direction so as to output a horizontal synchronized signal when the light beams come to the same position on the surface to be scanned in the horizontal scanning direction.”

Moreover, Omura and Kanazawa, failing to suggest the orientation of the light receiving surface of the horizontal synchronization detecting means as recited in the claims, fails to suggest its attendant advantages. In the Omura system, even if the optical path length of the light beams are aligned at a pre-deflection state, but the surface to be scanned is inclined, the optical path length to the scanned surface varies. The present invention of claim 1, by orienting the light receiving surface of the horizontal synchronization detecting means as recited, corrects for this variance in the optical path length. This advantage is not suggested by Omura and Kanazawa.

Independent claim 19 recites “wherein a light receiving surface of the horizontal synchronization sensor is tilted in the vertical scanning direction so as to output a horizontal synchronized signal when the light beams come to the same position on the surface to be scanned in the horizontal scanning direction”, and is thus patentable over Omura and Kanazawa for reasons analogous to claim 1.

The dependent claims are patentable for at least the same reasons as their respective independent claims, as well as for further patentable features recited therein.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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